

Testing Laboratories

P.O. Box 5387 • Fullerton, CA 92838 (714) 449-9937 • FAX (714) 4499685

JONES ENVIRONMENTAL

LABORATORY REPORT

Client:

The Reynolds Group

11/24/09

Client Address:

P.O. Box 1996

Report Date: JEL Ref. No.:

B-4949

Tustin, CA 92681-1996

Attn:

Al Fuan

Date Sampled: Date Received: 11/24/09 11/24/09

Project

Fullerton Business Park - North

Date Analyzed:

11/24/09

Project Address:

1551 Orangethorpe Ave., Fullerton, CA

Physical State:

Soil Gas

ANALYSES REQUESTED

1. EPA 8260B- Volatile Organics by GC/MS + Oxygenates

Sampling - Soil Gas samples are collected in glass gas-tight syringes equipped with Teflon plungers. Tubing placed in the ground for soil gas sampling is purged three different times as recommended by DTSC/RWQCB regulations. This purge test determines how many purges of the soil gas tubing are needed throughout the project. One, three and seven purge volumes were analyzed to make this determination.

A tracer gas, n-Propanol, was placed at the tubing-surface interface before sampling. This compound is analyzed during the 8260B analytical run to determine if there are surface leaks into the subsurface due to improper installation of the probe. No n-Propanol was found in any of the samples reported herein.

The sampling rate was approximately 200 cc/min except when noted differently on the chain of custody record using a gas tight syringe. 3 purge volumes were used since this purging level gave the highest results for the compound(s) of greatest interest.

Analytical - Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Ambient Air Blanks are analyzed every 12 hours as prescribed by the method. In addition, Matrix Spike (MS) and Matrix Spike Duplicates (MSD) are analyzed with each batch of Soil Gas samples. A duplicate sample is analyzed each day of the sampling activity.

All samples were analyzed within 30 minutes of sampling.

Approval:

Steve Jones, Ph.D. Laboratory Manager

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Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

	VEW3B-	VEW3B-	SV43B-	SV36B-	SV37B-	<u>Practical</u>	
Sample ID:	<u>5</u>	<u>15.5</u>	<u>SUB</u>	<u>SUB</u>	SUB SLAB	Quantitation	<u>Units</u>
						<u>Limits</u>	
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.020	ug/L
Bromobenzene	ND	ND	ND	ND	ND	0.020	ug/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.020	ug/L
Bromoform	ND	ND	ND	ND	ND	0.020	ug/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.020	ug/L
Chlorobenzene	ND	ND	ND	ND	0.172	0.020	ug/L
Chloroethane	ND	ND	ND	ND	ND	0.020	ug/L
Chloroform	ND	ND	ND	ND	0.142	0.020	ug/L
Chloromethane	ND	ND	ND	ND	ND	0.020	ug/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.020	ug/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.020	ug/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.020	ug/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.020	ug/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.020	ug/L
Dibromomethane	ND	ND	ND	ND	ND	0.020	ug/L
1,2- Dichlorohenzene	ND	ND	ND	ND	ND	0.020	ug/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	ug/L
1,4-Dichlorohenzene	ND	ND	ND	ND	ND	0.020	ug/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.020	ug/L
1,1-Dichloroethane	ND	ND	ND	ND	0.229	0.020	ug/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.020	ug/L
1,1-Dichloroethene	ND	ND	ND	ND	7.33	0.020	ug/L

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11/24/09

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Project Address:

1551 Orangethorpe Ave., Fullerton, CA

Physical State:

Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

Sample ID:	<u>VEW3B-</u> <u>5</u>	<u>VEW3B-</u> 15.5	<u>SV43B-</u> <u>SUB</u>	<u>SV36B-</u>) <u>SUB</u>	SV37B- SUB SLAB		<u>Units</u>
						<u>Limits</u>	
Analytes:							
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	ug/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	ug/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	ug/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.020	ug/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	ug/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.020	ug/L
cis-1,3-Dichloropropene	ND	ND	N'D	ND	ND	0.020	ug/L
trans-1.3-Dichloropropene	ND	ND	ND	ND	ND	0.020	ug/L
Ethylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
Freon 113	ND	ND	ND	ND	ND	0.020	ug/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.020	ug/L
Isopropylhenzene	ND	ND	ND	ND	ND	0.020	ug/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.020	ug/L
Methylene chloride	ND	ND	ND	ND	ND	0.020	ug/L
Naphthalene	ND	ND	ND	ND	ND	0.020	ug/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
Styrene	ND	ND	ND	ND	ND	0.020	ug/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	ug/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	ug/L
Tetrachloroethylene	0.748	I.48	0.512	17.1	11.4	0.020	ug/L
Toluene	0.502	0.812	ND	0.436	2.36	0.020	ug/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	ug/L
1.2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	ug/L
1,1,1-Trichloroethanc	ND	ND	ND	2.59	5.85	0.020	ug/L
1.1,2-Trichloroethane	ND	ND	ND	ND	ND `	0.020	ug/L
Trichloroethylene	0.198	0.125	0.048	17.3	19.9	0.020	ug/L



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Project Project Address: Fullerton Business Park - North 1551 Orangethorpe Ave., Fullerton, CA Date Analyzed: Physical State:

Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

	VEW3B-	VEW3B-	<u>SV43B-</u>	SV36B-	<u>SV37B-</u>	<u>Practical</u>	
Sample ID:	<u>5</u>	<u>15.5</u>	<u>SUB</u>	<u>SUB</u>	SUB SLAB	Quantitation	<u>Units</u>
						Limits	
Analytes:							
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.020	ug/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.020	ug/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.020	ug/L
Vinyl chloride	ND	ND	ND	ND	ND	0.020	ug/L
Xylenes	ND	ND	ND	ND	0.214	0.020	ug/L
MTBE	ND	ND	ND	ND	ND	0.020	ug/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.020	ug/L
Di-isopropylether	ND	ND	ND	ND	ND	0.020	ug/L
tert-amy imethy lether	ND	ND	ND	ND	ND	0.020	ug/L
tert-Butylalcohol	ND	ND	ND	ND	ND	0.100	ug/L
TIC							
n-Propanol	ND	ND	ND	ND	ND	0.020	ug/L
Dilution Factor	1	1	1	1	1		
Surrogate Recovery:						QC Limits	
Dibromofluoromethane	95%	103%	104%	104%	98%	60 - 140	
Toluene-d ₈	117%	113%	110%	111%	113%	60 - 140	
4-Bromofluorobenzene	103%	103%	98%	98%	100%	60 - 140	



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Physical State:

11/24/09 Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

	<u>SV37B-</u>	<u>Practical</u>	
Sample ID:	SUB SLAB	<u>Quantitation</u>	Units
	<u>DUP</u>	<u>Limits</u>	
Analytes:			
Benzene	ND	0.020	ug/L
Bromobenzene	ND	0.020	ug/L
Bromodichloromethane	ND	0.020	ug/L
Bromoform	ND	0.020	ug/L
n-Butylbenzene	ND	0.020	ug/L
sec-Butylbenzene	ND	0.020	ug/L
tert-Butylbenzene	ND	0.020	ug/L
Carbon tetrachloride	ND	0.020	ug/L
Chlorobenzene	0.172	0.020	ug/L
Chloroethane	ND	0.020	ug/L
Chloroform	0.116	0.020	ug/L
Chloromethane	ND	0.020	ug/L
2-Chlorotoluene	ND	0.020	ug/L
4-Chlorotoluene	ND	0.020	ug/L
Dibromochloromethane	ND	0.020	ug/L
1.2-Dibromo-3-chloropropane	ND	0.020	ug/L
1,2-Dibromoethane (EDB)	ND	0.020	ug/L
Dibromomethane	ND	0.020	ug/L
1,2- Dichlorobenzene	ND	0.020	ug/L
1,3-Dichlorobenzene	ND	0.020	ug/L
1,4-Dichlorobenzene	ND	0.020	ug/L
Dichlorodifluoromethane	ND	0.020	ug/L
1,1-Dichloroethane	0.196	0.020	ug/L
1.2-Dichloroethane	ND	0.020	ug/L
1,1-Dichloroethene	5.77	0.020	ug/L



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Project

Fullerton Business Park - North

SV37B-

Date Received:

11/24/09

Practical

Project Address:

1551 Orangethorpe Ave., Fullerton, CA

Date Analyzed: Physical State:

11/24/09 Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

	3 V 3 / D-	Practical	
Sample ID:	SUB SLAB	<u>Quantitation</u>	<u>Units</u>
	<u>DUP</u>	<u>Limits</u>	
Analytes:			
cis-1,2-Dichloroethene	ND	0.020	ug/L
trans-1,2-Dichloroethene	ND	0.020	ug/L
1,2-Dichloropropane	ND	0.020	ug/L
1,3-Dichloropropanc	ND	0.020	ug/L
2.2-Dichloropropane	ND	0.020	ug/L
1,1-Dichloropropene	ND	0.020	ug/L
cis-1,3-Dichloropropene	ND	0.020	ug/L
trans-1,3-Dichloropropene	ND	0.020	ug/L
Ethylbenzene	ND	0.020	ug/L
Freon 113	ND	0.020	ug/L
Hexachlorobutadiene	ND	0.020	ug/L
Isopropylbenzene	ND	0.020	ug/L
4-Isopropyltoluene	ND	0.020	ug/L
Methylene chloride	ND	0.020	ug/L
Naphthalene	ND	0.020	ug/L
n-Propylbenzene	ND	0.020	ug/L
Styrene	ND	0.020	ug/L
1,1,1,2-Tetrachloroethane	ND	0.020	ug/L
1,1,2,2-Tetrachloroethane	ND	0.020	ug/L
Tetrachloroethylene	10.5	0.020	ug/L
Toluene	2.06	0.020	ug/L
1.2,3-Trichlorobenzene	ND	0.020	ug/L
1,2,4-Trichlorobenzene	ND	0.020	ug/L
1,1,1-Trichloroethane	5.30	0.020	ug/L
1,1,2-Trichloroethane	ND	0.020	ug/L
Trichloroethylene	17.0	0.020	ug/L
			-



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11/24/09

Project Address:

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Physical State:

Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

Sample ID:	SV37B- SUB SLAB DUP	Practical Quantitation Limits	<u>Units</u>
Analytes:			
Trichlorofluoromethane	ND	0.020	ug/L
1,2,3-Trichloropropane	ND	0.020	ug/L
1,2,4-Trimethylbenzene	ND	0.020	ug/L
1,3,5-Trimethylbenzene	ND	0.020	ug/L
Vinyl chloride	ND	0.020	ug/L
Xylenes	0.182	0.020	ug/L
MTBE	ND	0.020	ug/L
Ethyl-tert-butylether	ND	0.020	ug/L
Di-isopropylether	ND	0.020	ug/L
tert-amylmethylether	ND	0.020	ug/L
tert-Butylalcohol	ND	0.100	ug/L
TIC			
n-Propanol	ND	0.020	ug/L
Dilution Factor	1		
Surrogate Recovery: Dibromofluoromethane Toluene-d ₈ 4-Bromofluorobenzene	92% 112% 98%	<u>OC Limits</u> 60 - 140 60 - 140 60 - 140	

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QUALITY CONTROL INFORMATION

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Soil Gas

EPA 8260B- Volatile Organics by GC/MS + Oxygenates

Sample Spiked: AMBIENT AIR

Parameter	MS Recovery (%)	MSD Recovery (%)	<u>RPD</u>	Acceptability Range (%)
1,1-Dichloroethylene	119%	123%	3.0%	60 - 140
Benzene	92%	94%	2.9%	60 - 140
Trichloroethylene	104%	106%	2.2%	60 - 140
Toluene	104%	108%	3.6%	60 - 140
Chlorobenzene	102%	103%	1.2%	60 - 140

Method Blank = Not Detected

MS = Matrix Spike

MSD = Matrix Spike Duplicate RPD = Relative Percent Difference